



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

999 18th STREET - SUITE 500  
DENVER, COLORADO 80202-2466

JUN 19 1996

Ref: 8P2-W-GW

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Ms. Angela R. Ely  
Administrative Operations Manager  
Petroglyph Operating Company, Inc.  
6209 North Highway 61  
Hutchinson, Kansas 67502

RE: UIC Permit Minor Modification  
Conversion of Additional Wells (5)  
Antelope Creek Waterflood  
EPA Area Permit UT2736-00000  
Duchesne County, Utah

Dear Ms. Ely:

Your letter of April 3, 1996, requesting that the following five (5) wells be converted to Class II enhanced oil recovery wells and added to the Antelope Creek Waterflood, as authorized under EPA Area Permit UT2736-00000, is hereby granted.

<u>NAME</u>	<u>LOCATION</u>	<u>EPA PERMIT NO.</u>
Ute Tribal 04-01	NE NE Section 4	UT2736-04322
Ute Tribal 05-08	SE NE Section 5	UT2736-04324
Ute Tribal 29-08A	SE NE Section 29	UT2736-04325
Ute Tribal 05-16	SE SE Section 5	UT2736-04327
Ute Tribal 04-05	SW NW Section 4	UT2736-04328

These additional wells are within the boundary of the existing area permit for the Antelope Creek Waterflood (UT2736-00000), and this addition is made by minor permit modification according to the terms and conditions of that permit. Unless specifically mentioned in the Minor Permit Modification, all terms and conditions of the original permit will apply to the construction, operation, monitoring, and plugging and abandonment of these additional injection wells. The proposed well location, well schematic, conversion procedures, and revised plugging and abandonment plans and schematics submitted by your office have been reviewed and approved as follows:

- (1) The construction of these wells have been reviewed and found satisfactory as submitted, therefore, no corrective action is required.



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JUN 19 1996

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Ms. Angela R. Ely  
Administrative Operations Manager  
Petroglyph Operating Company, Inc.  
6209 North Highway 61  
Hutchinson, Kansas 67502

RE: UIC Perm  
Conversi  
Antelope  
EPA Area  
Duchesne

*Lean under UT20736-00000  
Modification - minor  
Mod Approved 6/19/1996  
Will need to link with  
UT20736-04322  
UT20736-04324  
UT20736-04325  
UT20736-04327  
UT20736-04328  
8/ Add Well to Area Permit  
in new database also.  
UT20736-00000 96 Jun 19 Swells*

county, Utah

Dear Ms. Ely:

Your letter of April 3, 1996, requesting that the following five (5) wells be converted to Class II enhanced oil recovery wells and added to the Antelope Creek Waterflood, as authorized under EPA Area Permit UT2736-00000, is hereby granted.

<u>NAME</u>	<u>LOCATION</u>	<u>EPA PERMIT NO.</u>
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- (1) The construction of these wells have been reviewed and found satisfactory as submitted, therefore, no corrective action is required.



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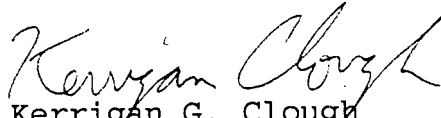


- (3) The well has successfully completed and passed a **mechanical integrity test (MIT)**, guidance enclosed.

All other provisions and conditions of the permit remain as originally issued.

If you have any questions, please contact Mr. Chuck Williams at the above letterhead address, citing **MAIL CODE 8P2-W-GW** or telephone Mr. Williams at (303) 312-6625. Thank you for your continued cooperation.

Sincerely,



Kerrigan G. Clough  
Assistant Regional Administrator  
Office of Pollution Prevention,  
State and Tribal Assistance

Enclosures:      Schematics - Conversion  
                  MIT Guidance and EPA Forms  
                  Well Rework Record EPA Form 7520-12

cc w/Enclosures:    Mr. Ferron Secakuku  
                          Energy & Mineral Resource Dep't.  
                          Ute Indian Tribe

                          Mr. Luke Duncan, Chairman  
                          Uintah & Ouray Business Committee  
                          Northern Ute Tribe

                          Mr. Norman Cambridge  
                          Uintah & Ouray Agency  
                          BIA

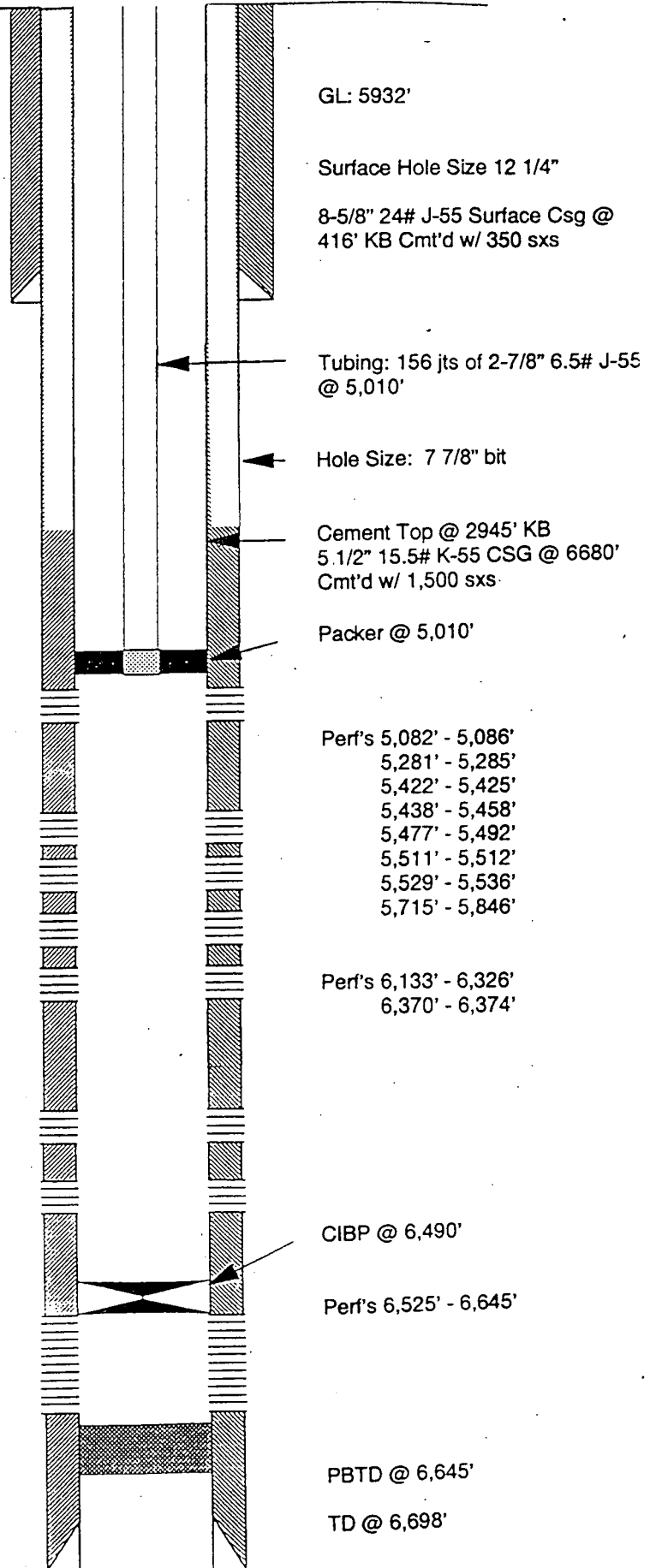
                          Mr. Gil Hunt  
                          State of Utah Natural Resources  
                          Division of Oil, Gas, and Mining

                          Mr. Jerry Kenczka  
                          BLM - Vernal District Office

**Ute Tribal #04-01  
Wellbore Diagram  
After Conversion**

**Well History:**

5/30/83	Spud Well "Coors"
6/24/83	Perf'd 6645'-35, 6525'-30, 6370'-74, Brk Dwn 2% KCl water Frac'd 76,500# sand ISIP 2,500 psi
6/30/83	Perf'd 6325'-26, 6311'-12, 6285'-86, 6269'-71, 6253'-54, 6248'-49, 6229'-31, 6190'-91, 6172'- 74, 6160'-67, 6133'-40 Brk Dwn 7½% HCl Frac'd 90,000# sand ISIP 2,500 psi
9/8/83	Perf'd 5846, 43, 40, 36, 04, 03, 02, 5800 Perf'd 5743, 33, 29, 25, 21, 15 Brk Dwn 7½% Acid Frac'd 100,716# sand ISIP 2,700 psi
11/18/83	Perf'd 5477'-92, 5111'-15, 5529'-36 Frac'd 36,000# sand ISIP 2,000 psi
8/22/84	Perf'd 5082'-86, 5281'-85 Frac'd 100,000# sand
7/26/90	Pump Changes
2/7/92	Well Shut In
11/27/92	Acid job Put well back on production



Tubing Detail: 2' psp Packer, 156 jts

<p align="center"><b>Petroglyph Operating Co., Inc.</b></p> <p align="center"><b>Ute Tribal 04-01</b></p> <p align="center">(1331' FNL &amp; 1277' FEL)</p> <p align="center">NE NE Section 24-T5S-R3W Antelope Creek Field Duchesne Co, Utah</p> <p align="center">API #43-013 30762: Lease #14-20-H62-3503</p>
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Ute Tribal #05-08  
Wellbore Diagram  
After Conversion

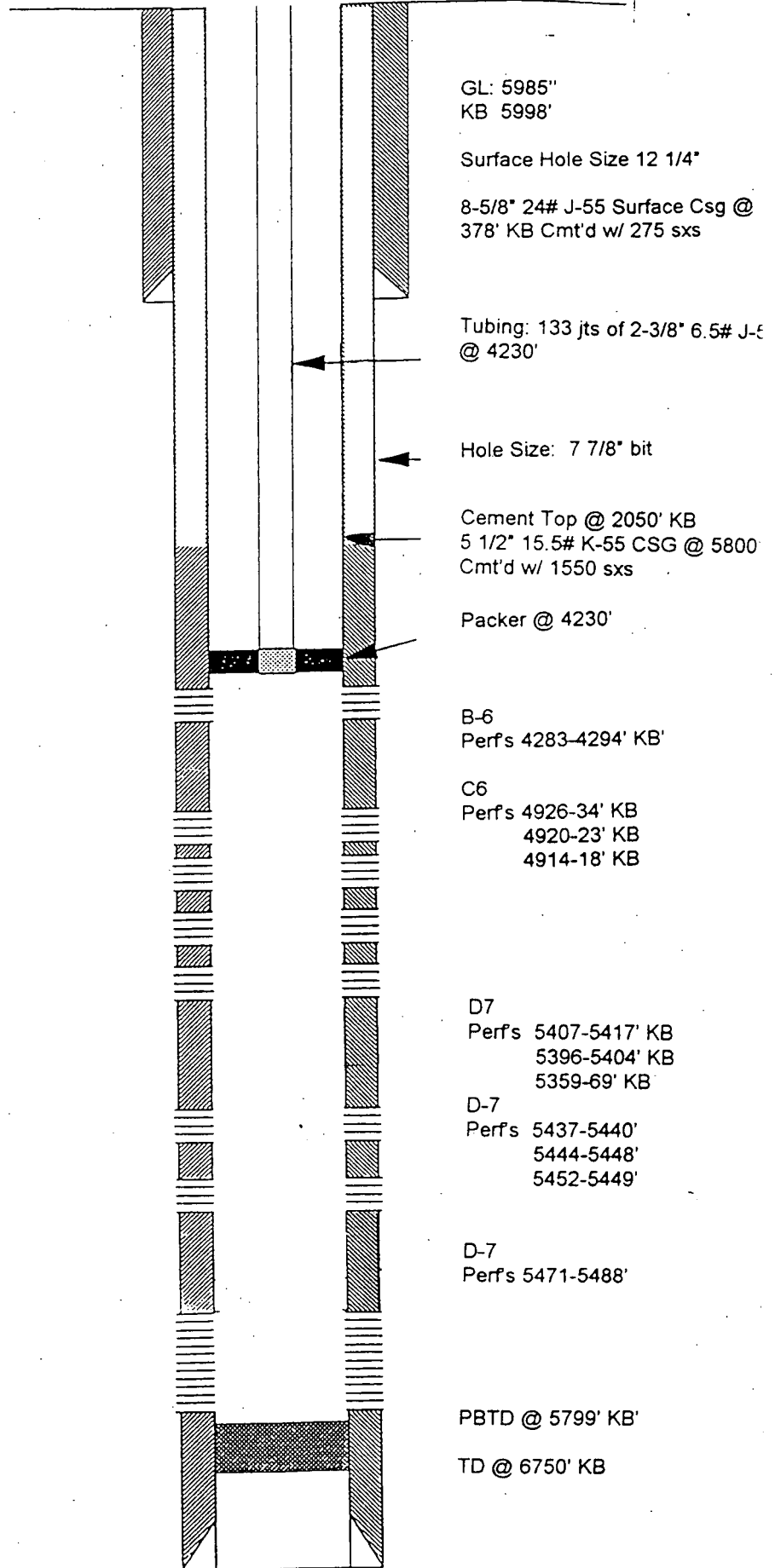
Well History

8/21/91 Spud Well

9/21/91 Perf'd D7 5471-88, 5449-52, 5444-48, 5437-40  
Brk Dwn 2% Kcl water  
Frac'd 120,000 # sand  
ISIP 2,320 psi

10/27/91 Perf'd B6 4283-94  
Frac'd 114,500# sand  
ISIP 1000 psi

8/24/95 Pump Changes



( Not to Scale )

Petroglyph Operating Co., Inc.

**Ute Tribal 05-08**

(2500' FNL & 550' FEL)

SE NE Section 5-T5S-R3W  
Antelope Creek Field  
Duchesne Co, Utah

API #43-013 31306: Lease #14-20-H62-4650

Ute Tribal #29-08A  
Wellbore Diagram  
After Conversion

Well History:

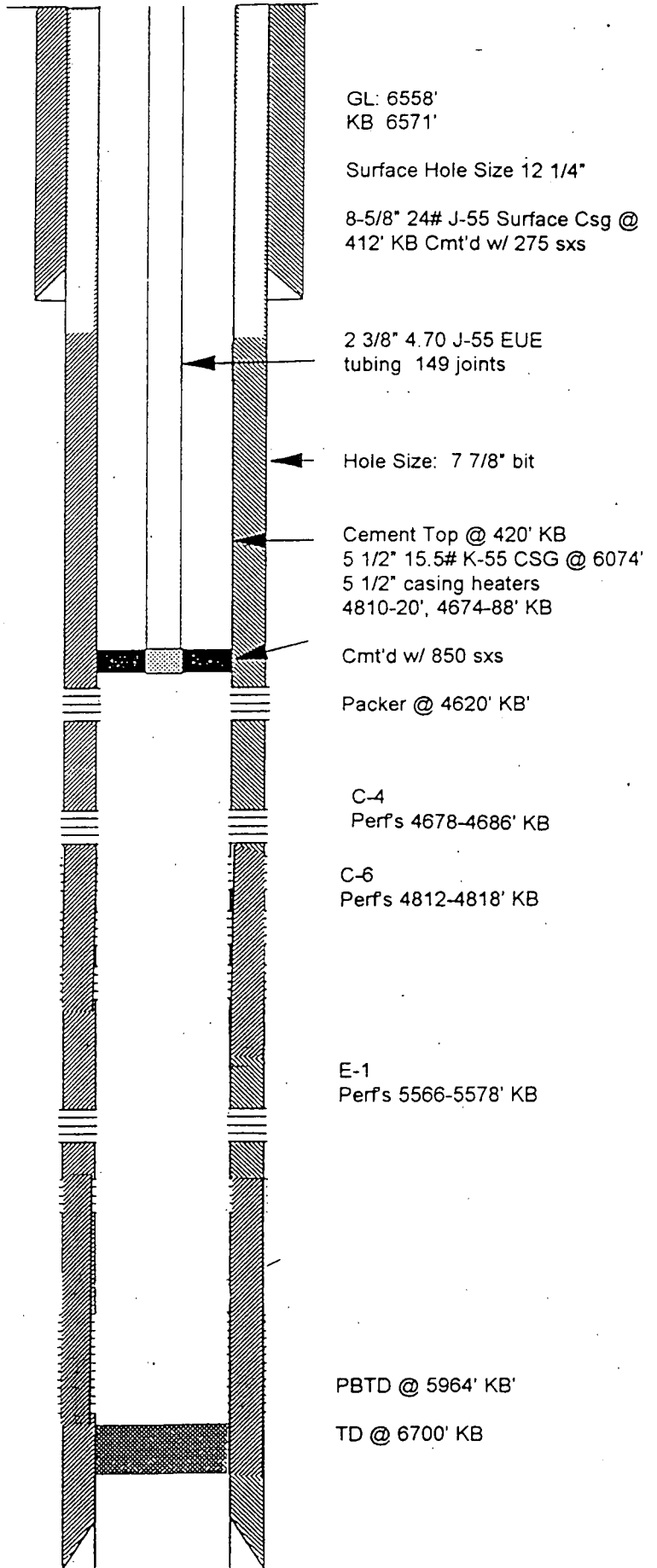
9/9/91 Spud Well "Coors"

9/12/91 Ran 5 1/2" casing with electric heater sections in 5 1/2" casing string 4810-20, 4674-88' KB.

9/25/91 Perf'd 4812-18'  
Brk Dwn 7 1/2% HCl  
Frac'd 85,000# sand  
ISIP 2,000 psi

10/4/91 Perf'd 4678-86'  
Brk Dwn 7 1/2% Acid  
Frac'd 100,00# sand  
ISIP 2,910 psi

10/15/91 Put well on production



Petroglyph Operating Co., Inc.

**Ute Tribal 29-08A**

(2600' FNL & 600' FEL)

SE NE Section 29-T5S-R3W

Antelope Creek Field

Duchesne Co, Utah

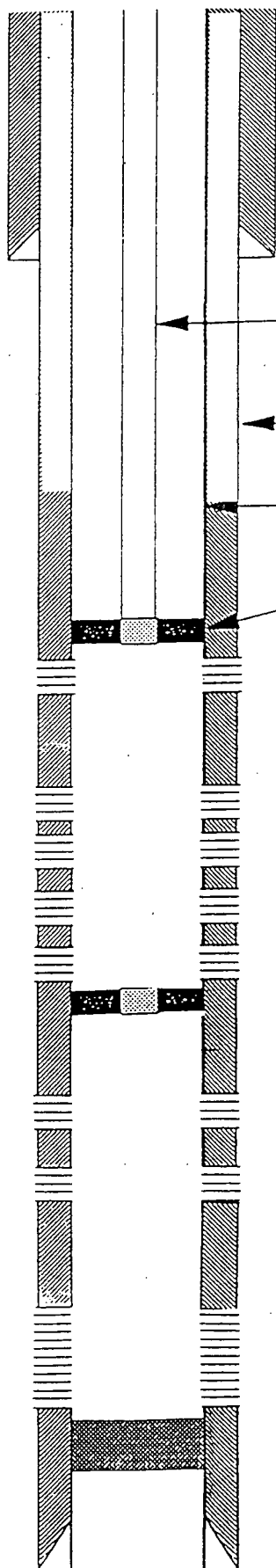
API #43-013-31305; Lease #14-20-H62-3518

( Not to Scale )

**Ute Tribal #05-16  
Wellbore Diagram  
After Conversion**

**Well History:**

5/24/95	Spud Well
10/12/95	Perf'd D-7 5438-42, 5414-17', 5396-5400', 5390-92', 5374-80', Brk Dwn 2% KCl water Frac'd 57,400# sand , ISIP 2,495 psi
10/13/95	Perf'd D-3 5201-06' KB Brk Dwn 2% KCL water Frac'd 29,500# sand ISIP 1980
10/19/95	Squeeze cemented D-3 Perfs
10/20/95	Perf'd C-5 4827-32, 4816-20 Perf'd C-6 4934-38, 4908-12, 4918-23 Brk Dwn 2% KCL water Frac'd 67,800# sand ISIP 2070 psi
4/1/96	Re Frac C-6 sand Frac'd 25,500# sand ISIP 1,662 psi



GL: 6049'  
KB 6059'

Surface Hole Size 12 1/4"

8-5/8" 24# J-55 Surface Csg @  
434 KB Cmt'd w/ 225 sxs

Tubing: 154 jts of 2-3/8" 6.5# J-55  
@ 4770' KB

Hole Size: 7 7/8" bit

Cement Top @ 2750' KB  
5 1/2" 15.5# K-55 CSG @ 6147"  
Cmt'd w/ 440 sxs

Packer @ 4770' KB

C-5  
Perf's 4827-32' KB  
4816-20' KB

C6  
Perf's 4934-38' KB  
4908-12' KB  
4918-23' KB

RTBP set at 5080' KB

D-3  
Perf's 5201-06' KB  
Cement Squeezed'

D-7  
Perf's 5438-42' KB  
5414-17'  
5396-5400'  
5390-92'  
5374-80'

PBTD @ 6088' KB'

TD @ 6190' KB

**Petroglyph Operating Co., Inc.**

**Ute Tribal 05-16**

(708' FSL & 523' FEL)

SE SE Section 5-T5S-R3W  
Antelope Creek Field  
Duchesne Co, Utah

API #43-013 31527; Lease #14-20-H62-3504

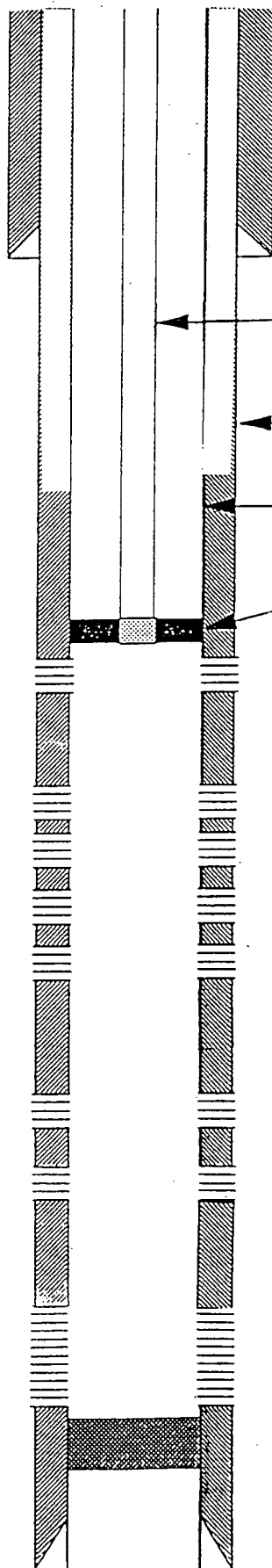
( Not to Scale )



**Ute Tribal #04-05  
Wellbore Diagram  
After Conversion**

**Well History:**

5/2/95	Spud Well
10/26/95	Perf'd D-7 5500-04, 5454-60, 5418-22 5382-88, 5359-68, 5348-50, Brk Dwn 2% KCl water Frac'd 158,400# sand ISIP 1,950 psi
10/30/95	Perf'd D-3 5228-31 Brk Dwn 2% KCL water Frac'd 22,940# sand ISIP Screen out
11/3/95	Perf'd C5 4848-52 Perf'd C6 4942-48 Brk Dwn 2% KCL water Frac'd 66020# sand ISIP 1,772 psi
11/9/95	Perf'd B11 4564-72 Frac'd 27,700# sand ISIP 1,918 psi
11/14/95	Perf'd B6 4328-36 Frac'd 33,280# sand ISIP 2,078 psi
2/30/95	Date of First Production



GL: 5997'  
KB 6007'

Surface Hole Size 12 1/4"

8-5/8" 24# J-55 Surface Csg @  
425 KB Cmt'd w/ 350 sxs

Tubing: 139 jts of 2-3/8" 4.7# J-55  
@ 4298' KB'

Hole Size: 7 7/8" bit

Cement Top @ 2450' KB  
5 1/2" 15.5# K-55 CSG @ 5736"  
Cmt'd w/ 1450 sxs

Packer @ 4298'

B-6  
Perf's 4328-36' KB'

B-11  
Perf's 4564-72' KB

C-5  
Perf's 4848-52' KB

C6  
Perf's 4942-48

D-3  
Perf's 5228-31' KB

D-7  
Perf's 5504-5348' KB

PBTD @ 6190' KB'

TD @ 6453' KB

**Petroglyph Operating Co., Inc.**

**Ute Tribal 04-05**

(2725' FNL & 660' FWL)

SW NW Section 4-T5S-R3W  
Antelope Creek Field  
Duchesne Co, Utah

API #43-013 31462; Lease #14-20-H62-3503

( Not to Scale )

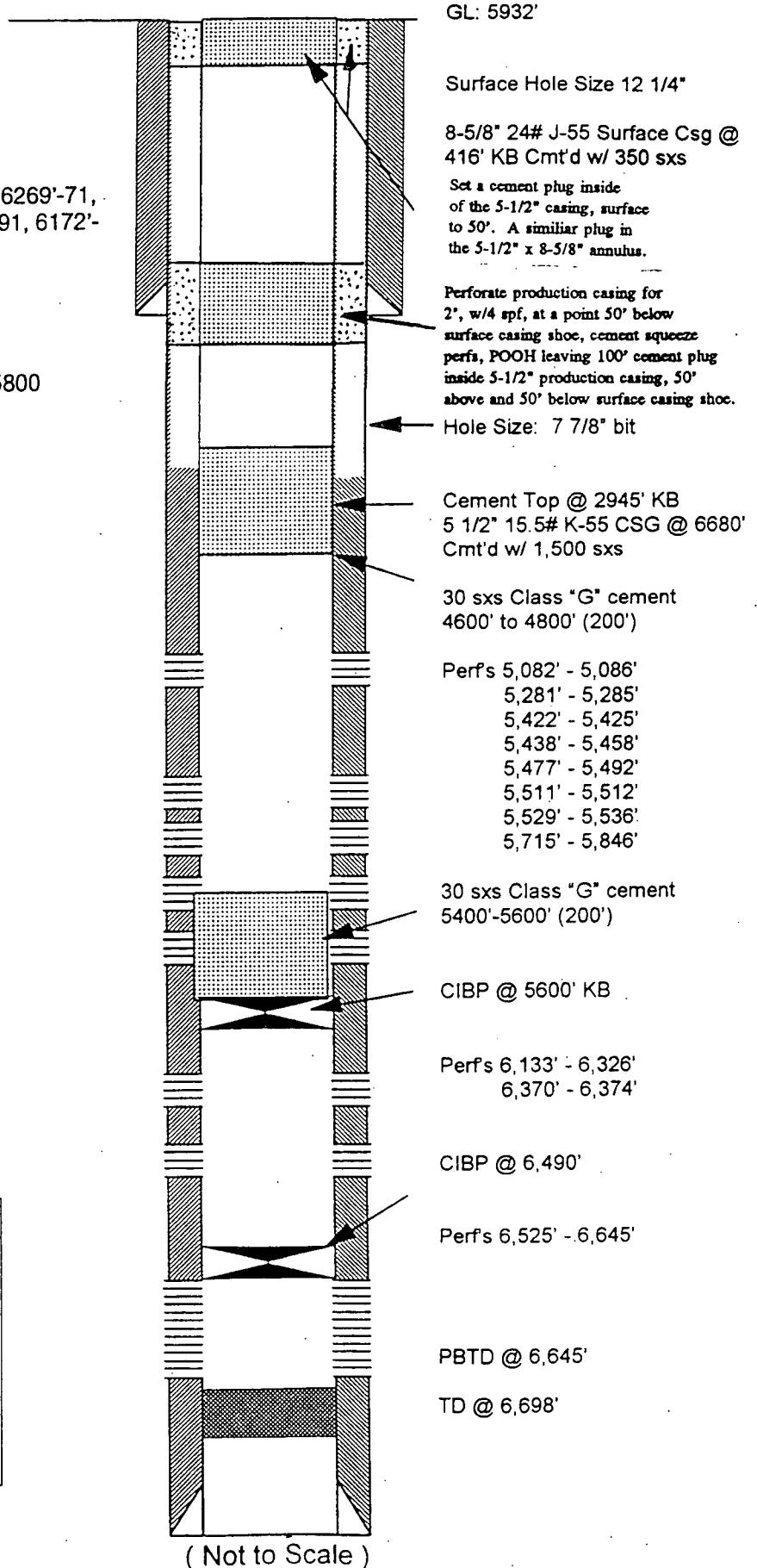
**Ute Tribal #04-01  
Wellbore Diagram  
Plugged**

**Well History:**

5/30/83	Spud Well "Coors"
6/24/83	Perf'd 6645'-35, 6525'-30, 6370'-74, Brk Dwn 2% KCl water Frac'd 76,500# sand ISIP 2,500 psi
6/30/83	Perf'd 6325'-26, 6311'-12, 6285'-86, 6269'-71, 6253'-54, 6248'-49, 6229'-31, 6190'-91, 6172'- 74, 6160'-67, 6133'-40 Brk Dwn 7½% HCl Frac'd 90,000# sand ISIP 2,500 psi
9/8/83	Perf'd 5846, 43, 40, 36, 04, 03, 02, 5800 Perf'd 5743, 33, 29, 25, 21, 15 Brk Dwn 7½% Acid Frac'd 100,716# sand ISIP 2,700 psi
11/18/83	Perf'd 5477'-92, 5111'-15, 5529'-36 Frac'd 36,000# sand ISIP 2,000 psi
8/22/84	Perf'd 5082'-86, 5281'-85 Frac'd 100,000# sand
7/26/90	Pump Changes
2/7/92	Well Shut In
11/27/92	Acid job Put well back on production

Tubing Detail: 2' psp Packer, 156 jts

<b>Petroglyph Operating Co., Inc.</b> <b>Ute Tribal 04-01</b>  (1331' FNL & 1277' FEL)  NE NE Section 24-T5S-R3W Antelope Creek Field Duchesne Co, Utah API #43-013 30762; Lease #14-20-H62-3503
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# Ute Tribal #05-C Wellbore Diagram Plugged

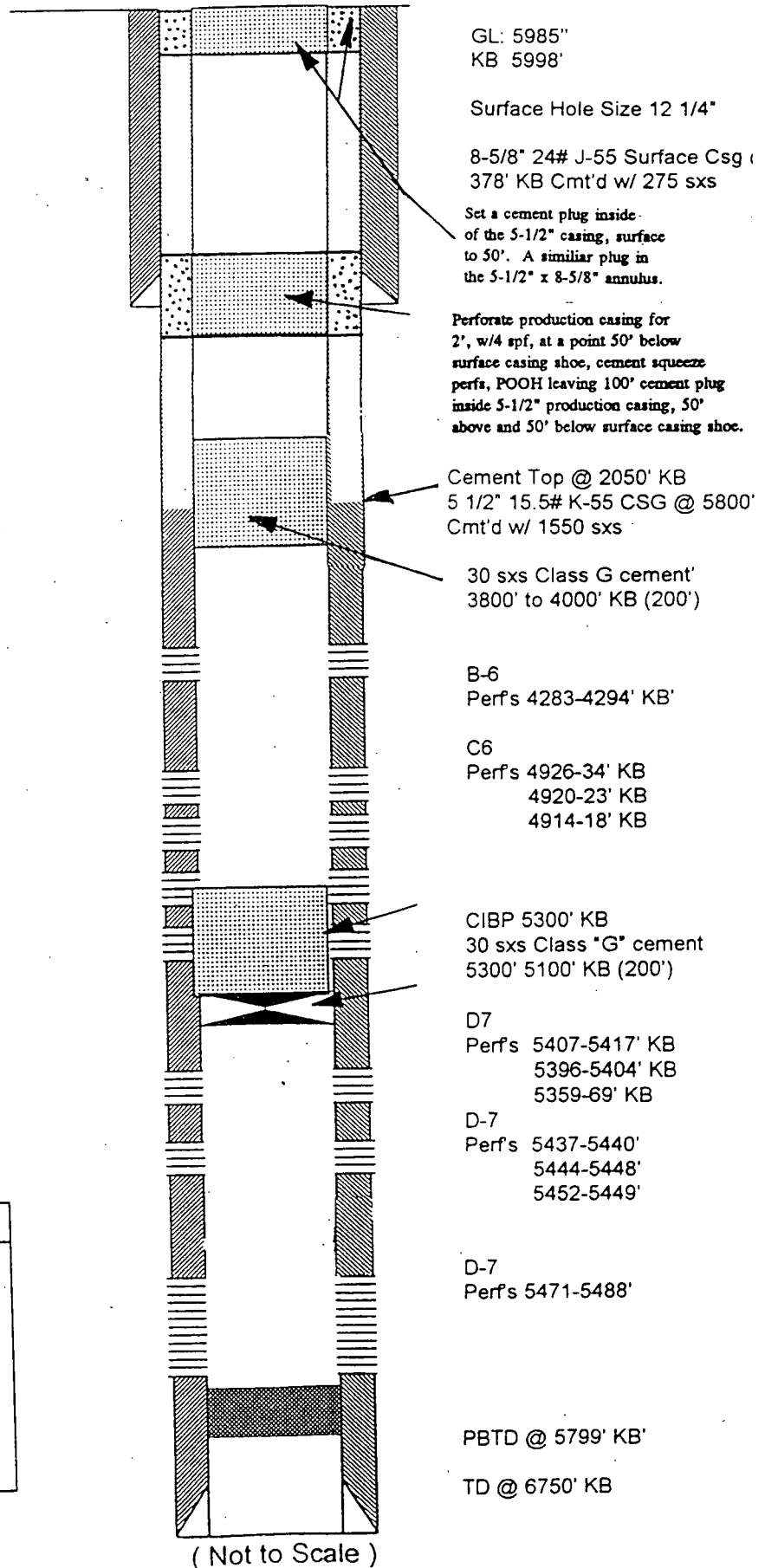
## Well History

8/21/91 Spud Well

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Brk Dwn 2% Kcl water  
Frac'd 120,000 # sand  
ISIP 2,320 psi

10/27/91 Perf'd B6 4283-94  
Frac'd 114,500# sand  
ISIP 1000 psi

8/24/95 Pump Changes



Petroglyph Operating Co., Inc.

**Ute Tribal 05-08**

(2500' FNL & 550' FEL)

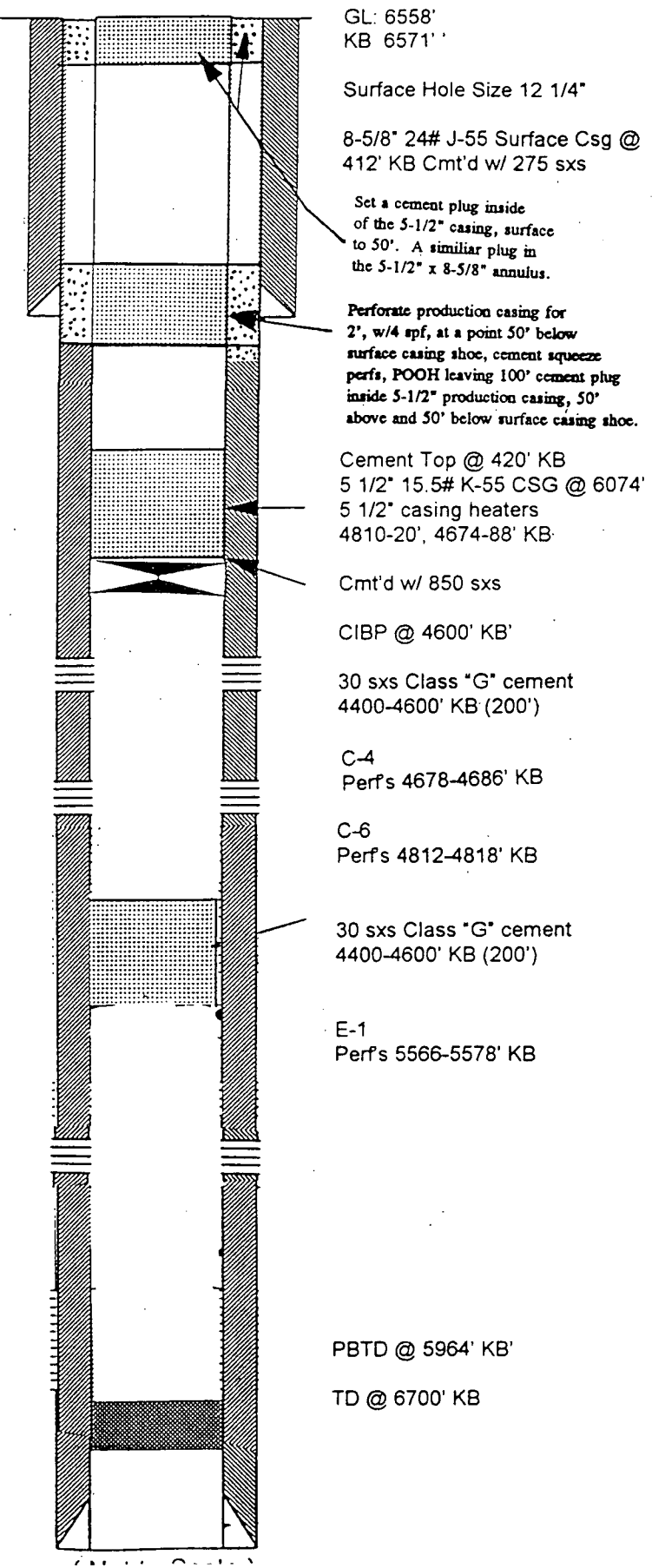
SE NE Section 5-T5S-R3W  
Antelope Creek Field  
Duchesne Co, Utah

API #43-013 31306: Lease #14-20-H62-4650

**Ute Tribal #29-08A**  
Wellbore Diagram  
Plugged

Well History:

9/9/91	Spud Well "Coors"
9/12/91	Ran 5 1/2" casing with electric heater sections in 5 1/2" casing string 4810-20, 4674-88' KB.
9/25/91	Perf'd 4812-18' Brk Dwn 7 1/2% HCl Frac'd 85,000# sand ISIP 2,000 psi
10/4/91	Perf'd 4678-86' Brk Dwn 7 1/2% Acid Frac'd 100,00# sand ISIP 2,910 psi
10/15/91	Put well on production

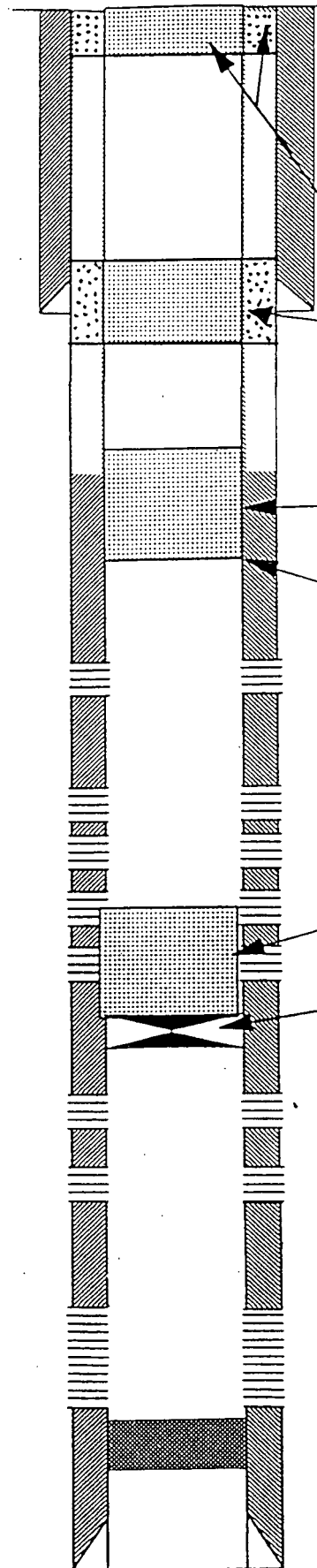


<b>Petroglyph Operating Co., Inc.</b> <b>Ute Tribal 29-08A</b>  (2600' FNL & 600' FEL)  SE NE Section 29-T5S-R3W Antelope Creek Field Duchesne Co, Utah API #43-013-31305; Lease #14-20-H62-3518
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**Ute Tribal #05-16  
Wellbore Diagram  
Plugged**

Well History:

5/24/95	Spud Well
10/12/95	Perf'd D-7 5438-42, 5414-17', 5396-5400', 5390-92', 5374-80', Brk Dwn 2% KCl water Frac'd 57,400# sand ISIP 2,495 psi
10/13/95	Perf'd D-3 5201-06' KB Brk Dwn 2% KCL water Frac'd 29,500# sand ISIP 1980
10/19/95	Squeeze cemented D-3 Perfs
10/20/95	Perf'd C-5 4827-32, 4816-20 Perf'd C-6 4934-38, 4908-12, 4918-23 Brk Dwn 2% KCL water Frac'd 67,800# sand ISIP 2070 psi
4/1/96	Re Frac C-6 sand Frac'd 25,500# sand ISIP 1,662 psi



GL: 6049'  
KB 6059'

Surface Hole Size 12 1/4"

8-5/8" 24# J-55 Surface Csg @  
434 KB Cmt'd w/ 225 sxs

Set a cement plug inside  
of the 5-1/2" casing, surface  
to 50'. A similar plug in  
the 5-1/2" x 8-5/8" annulus.

Perforate production casing for  
2", w/4 spf, at a point 50' below  
surface casing shoe, cement squeeze  
perfs, POOH leaving 100' cement plug  
inside 5-1/2" production casing, 50'  
above and 50' below surface casing shoe.

Cement Top @ 2750' KB  
5 1/2" 15.5# K-55 CSG @ 6147'  
Cmt'd w/ 440 sxs

30 sxs Class "G" cement  
4800'-4600' (200')

C-5  
Perf's 4827-32' KB  
4816-20' KB

C6  
Perf's 4934-38' KB  
4908-12' KB  
4918-23' KB

D-3  
Perf's 5201-06' KB  
Cement Squeezed'

30 sxs Class "G" cement  
5300-5100' (200;)  
CIBP 5300'

D-7  
Perf's 5438-42' KB  
5414-17'  
5396-5400'  
5390-92'  
5374-80'

PBTD @ 6088' KB'

TD @ 6190' KB

Petroglyph Operating Co., Inc.

**Ute Tribal 05-16**

(708' FSL & 523' FEL)

SE SE Section 5-T5S-R3W  
Antelope Creek Field  
Duchesne Co, Utah

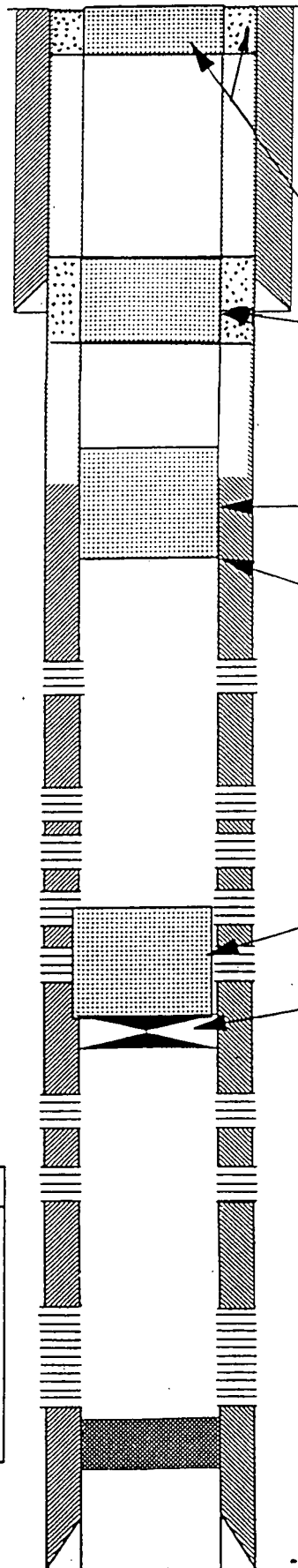
API #43-013 31527; Lease #14-20-H62-3504

( Not to Scale )

**Ute Tribal #04-05  
Wellbore Diagram  
Plugged**

**Well History:**

5/2/95	Spud Well
10/26/95	Perf'd D-7 5500-04, 5454-60, 5418-22 5382-88, 5359-68, 5348-50, Brk Dwn 2% KCl water Frac'd 158,400# sand ISIP 1,950 psi
10/30/95	Perf'd D-3 5228-31 Brk Dwn 2% KCL water Frac'd 22,940# sand ISIP Screen out
11/3/95	Perf'd C5 4848-52 Perf'd C6 4942-48 Brk Dwn 2% KCL water Frac'd 66020# sand ISIP 1,772 psi
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11/14/95	Perf'd B6 4328-36 Frac'd 33,280# sand ISIP 2,078 psi
12/30/95	Date of First Production



GL: 5997'  
KB 6007'

Surface Hole Size 12 1/4"

8-5/8" 24# J-55 Surface Csg @  
425 KB Cmt'd w/ 350 sxs

Set a cement plug inside  
of the 5-1/2" casing, surface  
to 50'. A similar plug in  
the 5-1/2" x 8-5/8" annulus.

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2", w/4 spf, at a point 50' below  
surface casing shoe, cement squeeze  
perfs, POOH leaving 100' cement plug  
inside 5-1/2" production casing, 50'  
above and 50' below surface casing shoe.

Cement Top @ 2450' KB  
5 1/2" 15.5# K-55 CSG @ 5736"  
Cmt'd w/ 1450 sxs

30 sxs Class "G" cement  
3800' - 4000' KB (200')

B-6  
Perf's 4328-36' KB'

B-11  
Perf's 4564-72' KB

C-5  
Perf's 4848-52' KB

C6  
Perf's 4942-48

30 sxs Class "G" cement  
5300' 5100' KB (200')  
CIBP 5300' KB

D-3  
Perf's 5228-31' KB

30 sxs Class "G" cement  
5300' 5100' KB (200')  
CIBP 5300' KB

D-7  
Perf's 5504-5348' KB

PBTD @ 6190' KB'

TD @ 6453' KB

**Petroglyph Operating Co., Inc.**

**Ute Tribal 04-05**

(2725' FNL & 660' FWL)

SW NW Section 4-T5S-R3W  
Antelope Creek Field  
Duchesne Co, Utah

API #43-013 31462: Lease #14-20-H62-3503

( Not to Scale )